

the observations of Messrs. Benzenberg and Brandes, many of the falling stars seen in Europe have been only thirty thousand toises high. One was even measured which did not exceed fourteen thousand toises, or five nautical leagues. These measures, which can give no result but by approximation, deserve well to be repeated. In warm climates, especially within the tropics, falling stars leave a tail behind them, which remains luminous 12 or 15 seconds: at other times they seem to burst into sparks, and they are generally lower than those in the north of Europe. We perceive them only in a serene and azure sky; they have perhaps never been below a cloud. Falling stars often follow the same direction for several hours, which direction is that of the wind. In the bay of Naples, M. Gay-Lussac and myself observed luminous phenomena very analogous to those which fixed my attention during a long abode at Mexico and Quito. These meteors are perhaps modified by the nature of the soil and the air, like certain effects of the looming or mirage, and of the terrestrial refraction peculiar to the coasts of Calabria and Sicily.

When we were forty leagues east of the island of Madeira, a swallow* perched on the topsail-yard. It was so fatigued, that it suffered itself to be easily taken. It was remarkable that a bird, in that season, and in calm weather, should fly so far. In the expedition of d'Entrecasteaux, a common swallow was seen 60 leagues distant from Cape Blanco; but this was towards the end of October, and M. Labillardière thought it had newly arrived from Europe. We crossed these latitudes in June, at a period when the seas had not for a long time been agitated by tempests. I mention this last circumstance, because small birds and even butterflies, are sometimes forced out to sea by the impetuosity of the winds, as we observed in the Pacific ocean, when we were on the western coast of Mexico.

The Pizarro had orders to touch at the isle of Lancerota, one of the seven great Canary Islands; and at five in the afternoon of the 16th of June, that island appeared so distinctly in view that I was able to take the angle of altitude of a conic mountain, which towered majestically over the

* *Hirundo rustica*, *Linn.*